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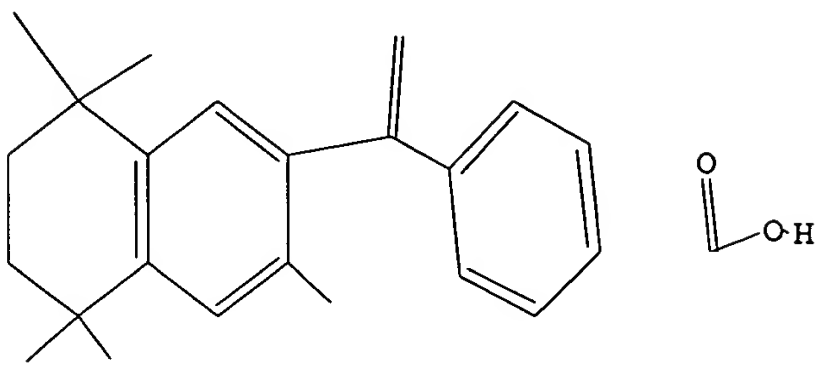

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	166.94	167.57

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FILE COVERS 1907 - 25 Jan 2006 VOL 144 ISS 5
FILE LAST UPDATED: 24 Jan 2006 (20060124/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

1/24/06

http://www.cas.org/infopolicy.html

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L5   ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2006 ACS on STN
AB   The preparation and binding characteristics of a novel RXR (retinoid X
     receptor) selective tritiated radioligand is described.  The results
     indicate that this probe may prove useful for further characterization of
     the RXR subtype of retinoid receptors.
AN   1995:267735  CAPLUS
DN   122:75576
TI   Biochemical characterization of a novel RXR-selective, high specific
     activity radioligand
AU   Mais, Dale E.; Berger, Elaine M.; Zhang, Lin; Boehm, Marcus F.
CS   Department of Pharmacology, Ligand Pharmaceuticals, Incorporated, San
     Diego, CA, 92121, USA
SO   Medicinal Chemistry Research (1994), 4(6), 406-13
     CODEN: MCREEB; ISSN: 1054-2523
PB   Birkhaeuser
DT   Journal
LA   English
IT   160436-02-2P
     RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (biochem. characterization of retinoid X receptor-selective, high
        specific activity radioligand)
RN   160436-02-2  CAPLUS
CN   Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8,8-pentamethyl-2-
     naphthalenyl)ethenyl]-, labeled with tritium (9CI)  (CA INDEX NAME)
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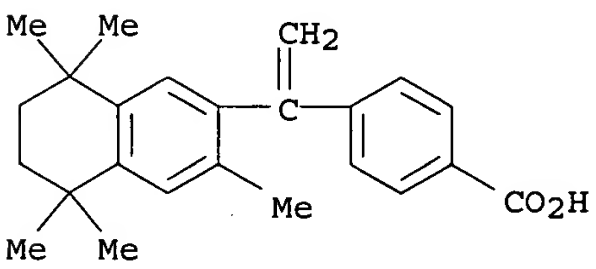

L5 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

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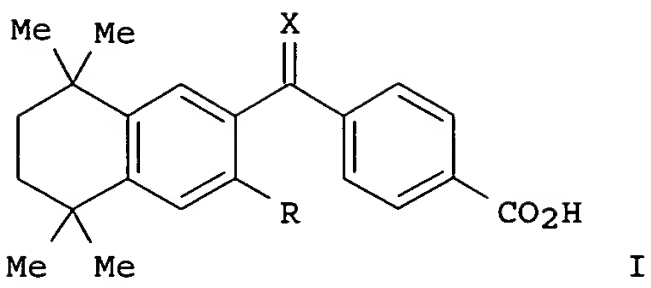
1/24/06

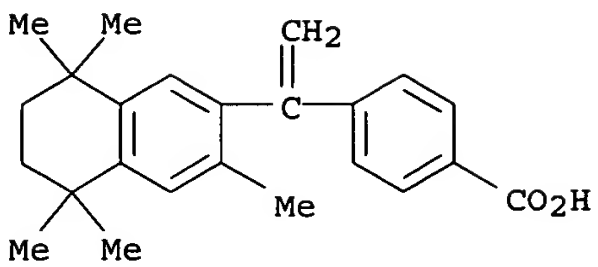
GI



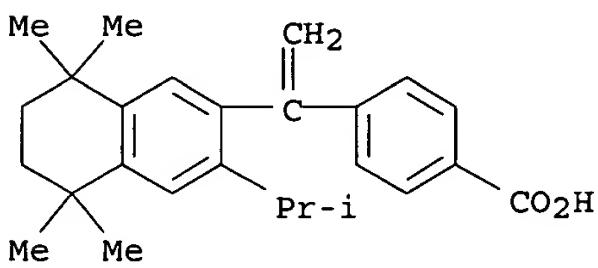
I

AB Two series of potent retinoid X receptor (RXR)-selective compds. were designed and synthesized based upon recent observation that(E)-4-[2-(5,5,8,8-tetramethyl-5,6,7,8-tetrahydro-2-naphthalenyl)-1-propenyl]benzoic acid binds and transactivates only the retinoic acid receptor (RAR) subtypes whereas its 3-Me derivative binds and transactivates both the RAR and RXR subfamilies. Functional groups in the 3-position of the tetrahydronaphthalenes I [R = H, alkyl, halo, OH, OMe; X = O, CH2] results in compds. which elicit potent and selective activation of the RXR class. Such RXR-selective compds. offer pharmacol. tools for elucidating the biol. role of the individual retinoid receptors with which they interact. Activation profiles in cotransfection and competitive binding assays as well as mol. modeling calcns. demonstrate critical structural determinants that confer selectivity for members of the RXR subfamily. The most potent compound of these series, I [R = Me, X = CH2], is the first RXR-selective retinoid (designated as LGD1069) to enter clin. trials for cancer indications.

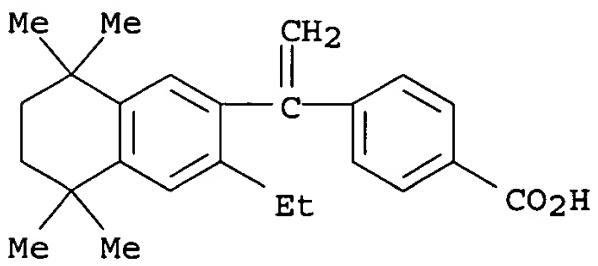
AN 1994:656056 CAPLUS
DN 121:256056
TI Synthesis and Structure-Activity Relationships of Novel Retinoid X Receptor-Selective Retinoids
AU Boehm, Marcus F.; Zhang, Lin; Badea, Beth Ann; White, Steven K.; Mais, Dale E.; Berger, Elaine; Suto, Carla M.; Goldman, Mark E.; Heyman, Richard A.
CS Department of Medicinal Chemistry, Ligand Pharmaceuticals Inc., San Diego, CA, 92121, USA
SO Journal of Medicinal Chemistry (**1994**), 37(18), 2930-41
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
IT **153559-49-0P 153559-56-9P 153559-59-2P**
158499-03-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and retinoid receptor binding of)
RN 153559-49-0 CAPLUS
CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8,8-pentamethyl-2-naphthalenyl)ethenyl]- (9CI) (CA INDEX NAME)



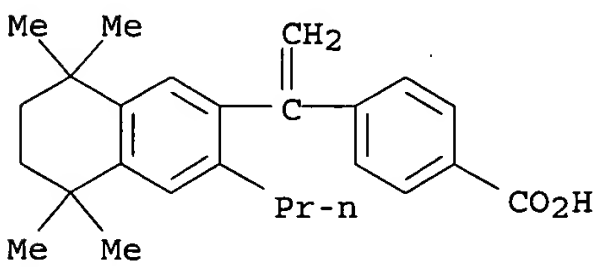
RN 153559-56-9 CAPLUS
CN Benzoic acid, 4-[1-[5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-3-(1-methylethyl)-2-naphthalenyl]ethenyl]- (9CI) (CA INDEX NAME)



RN 153559-59-2 CAPLUS
CN Benzoic acid, 4-[1-(3-ethyl-5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)ethenyl]- (9CI) (CA INDEX NAME)



RN 158499-03-7 CAPLUS
CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-3-propyl-2-naphthalenyl)ethenyl]- (9CI) (CA INDEX NAME)



L5 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
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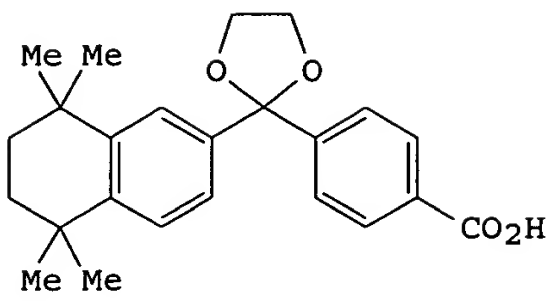

I

AB The invention provides a method of screening a substance for the ability to affect the formation of a retinoid X receptor (RXR) homodimer comprising combining the substance and a solution containing RXR receptors and determining the presence of homodimer formation. The screening method can be used to determine compds. which selectively activate homodimer formation and heterodimer formation. Also provided is a method of screening a substance for an effect on a RXR receptor homodimer's ability to bind DNA comprising combining the substance with the homodimer and determining the effect of the compound on the homodimer's ability to bind DNA. Finally, the invention provides methods of activating RXR receptor homodimer formation. Bridged bicyclic aromatic compds. are provided. These compds. are useful for modulating gene expression of retinoic acid receptors, vitamin D receptors and thyroid receptors. Pharmaceutical compns. and methods for modulating gene expression are provided as well. Retinoids were identified that specifically induce RXR homodimer formation and activate RXR homodimers on specific genetic response elements but not RAR/RXR heterodimers. These retinoids allow the specific activation of RXR-selective response pathways, while not inducing RAR-dependent response pathways. One of these compds., SR11237 (I), was prepared from Me 4-[(5,6,7,8-tetrahydro-5,5,8,8,-tetramethyl-2-naphthalenyl)carbonyl]benzoate (preparation given).

AN 1994:526151 CAPLUS
DN 121:126151

TI RXR receptor homodimer formation and bridged bicyclic aromatic compounds and their use in modulating gene expression and screening modulating compounds

IN Pfahl, Magnus; Zhang, Xiao Kun; Lehmann, Jurgen M.; Dawson, Marcia I.; Camerion, James F.; Hobbs, Peter D.; Jong, Ling
PA La Jolla Cancer Research Foundation, USA; SRI International

SO PCT Int. Appl., 102 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 5837725		A	19981117	US 1995-448991		19950524
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PATENT FAMILY INFORMATION:

FAN 1994:158149

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PI	WO 9325223	A1	19931223	WO 1993-US5759		19930616
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FAN 1996:577830

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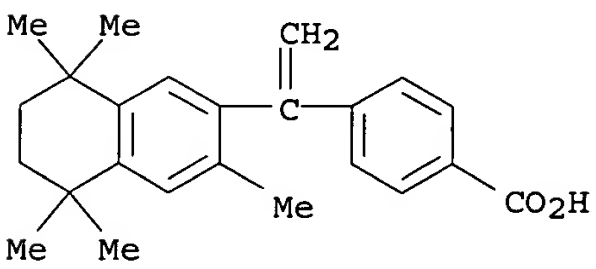
OS CASREACT 121:126151; MARPAT 121:126151

IT **153559-49-0P**
RL: PREP (Preparation)
(preparation of, retinoid X receptor homodimer formation and binding to genetic response element in relation to)

RN 153559-49-0 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8,8-pentamethyl-2-naphthalenyl)ethenyl]- (9CI) (CA INDEX NAME)



L5 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

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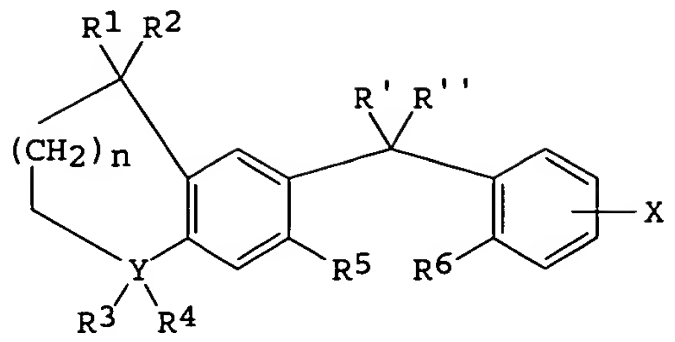

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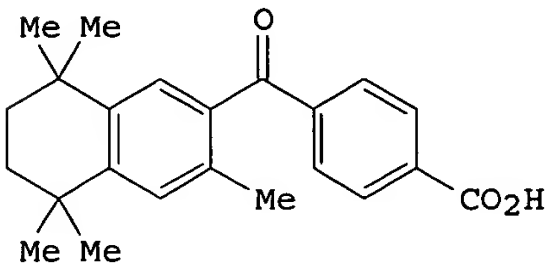

II

AB Ligands which selectively activate retinoid X receptors (RXR) in preference to retinoic acid receptors (RAR) are claimed. Claimed per se are several Markush structures, e.g., compds. I [R1, R2 = H, alkyl, acyl; Y = C, O, S, N, CH(OH), CO, SO, SO2, or a salt derivative; R3, R4 = H, alkyl, or is absent; R', R'' = H, alkyl, acyl, OH, alkoxy, thiol, thio ether, amino; or R'R'' = :O, :CH2, :S, :NOH, :NCN, CH2CH2, CH2O, etc.; R5, R6 = H, alkyl, halo, NO2, OH, alkoxy, SH, alkylthio, (di)(alkyl)amino, etc.; X = CO2H or derivs., CHO, tetrazolyl, PO3H2, SO3H, CH2OH, etc.], represented by 43 synthetic examples. Thus, acylation of 1,1,4,4,6-pentamethyl-1,2,3,4-tetrahydronaphthalene by mono-Me terephthalate using PCl5 and then AlCl3, and saponification of the ester product, gave title compound II. In a cotransfection assay, II activated RXR subtypes (α, β, γ) with efficacies of 130%, 52%, and 82%, resp. (vs. all-trans-retinoic acid as 100%), but had <2% to <4% efficacy for RAR subtypes. I synergistically increased the activities (e.g., antihyperproliferative) of RAR-active ligands, as well as other hormonal systems (e.g., clofibrate and 1,25-dihydroxyvitamin D activities).

AN 1994:217004 CAPLUS

DN 120:217004

TI Compounds (naphthalene and indane derivatives) having selectivity for retinoid X receptors

IN Boehm, Marcus F.; Heyman, Richard A.; Zhi, Lin

PA Ligand Pharmaceuticals Inc., USA

SO PCT Int. Appl., 101 pp.
CODEN: PIXXD2

DT Patent

LA English

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OS MARPAT 120:217004

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(preparation of, as retinoid receptor ligand)

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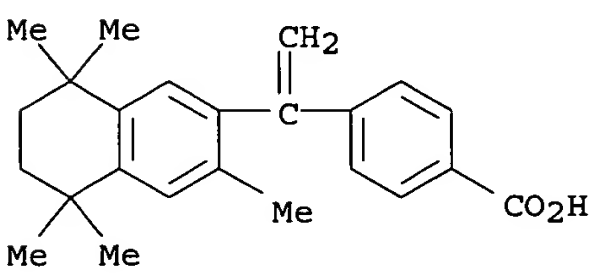

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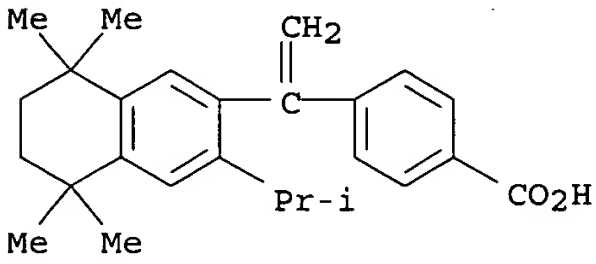

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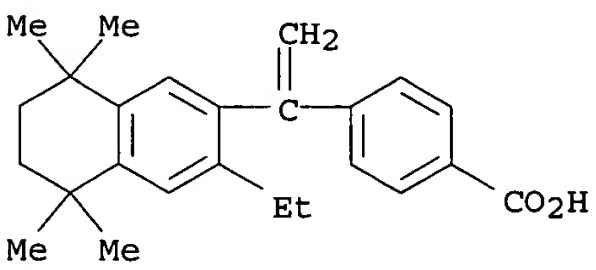

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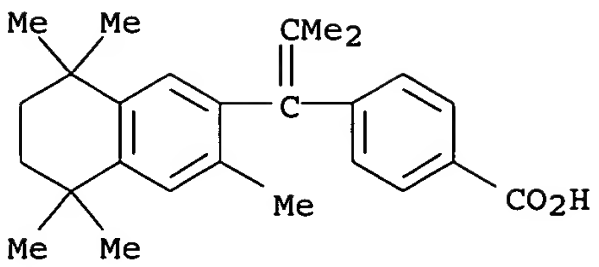

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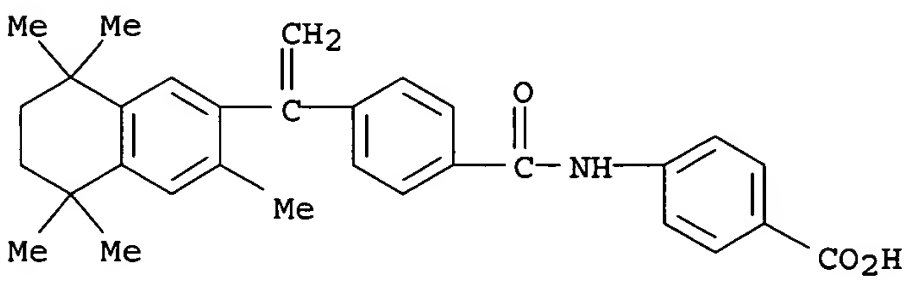

RN 153559-83-2 CAPLUS
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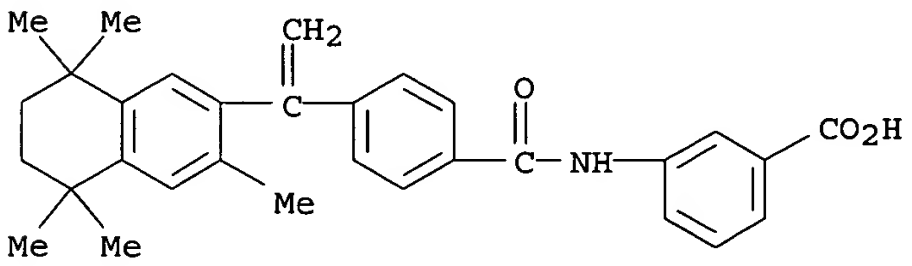

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

1/24/06

STRUCTURE FILE UPDATES: 24 JAN 2006 HIGHEST RN 872575-89-8
DICTIONARY FILE UPDATES: 24 JAN 2006 HIGHEST RN 872575-89-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

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* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
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Structure search iteration limits have been increased. See HELP SLIMITS
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REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
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http://www.cas.org/ONLINE/UG/regprops.html

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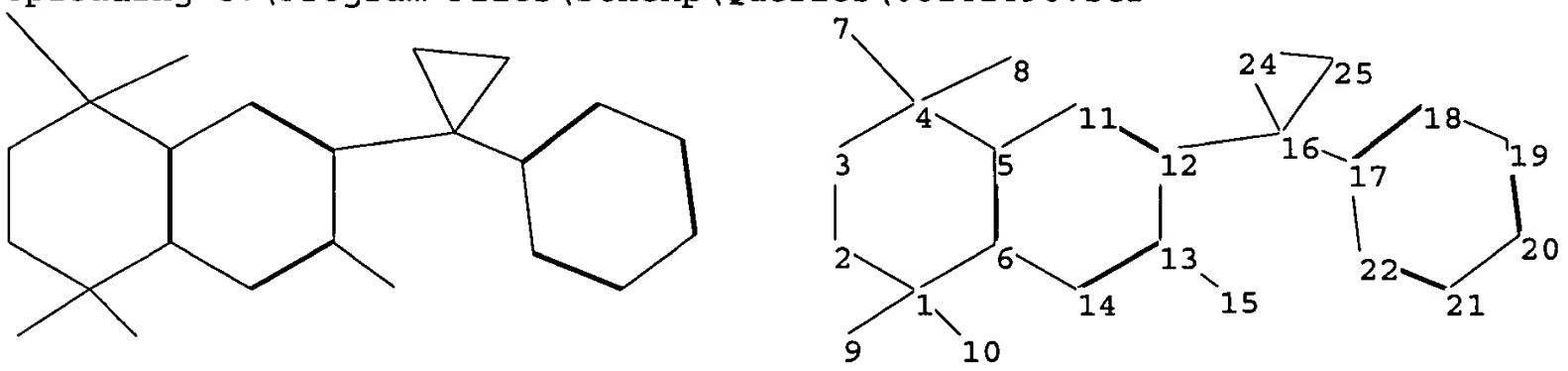

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Match level :
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L6 STRUCTURE UPLOADED

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
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FILE 'CAPLUS' ENTERED AT 12:09:20 ON 25 JAN 2006

1/24/06

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FILE COVERS 1907 - 25 Jan 2006 VOL 144 ISS 5
FILE LAST UPDATED: 24 Jan 2006 (20060124/ED)

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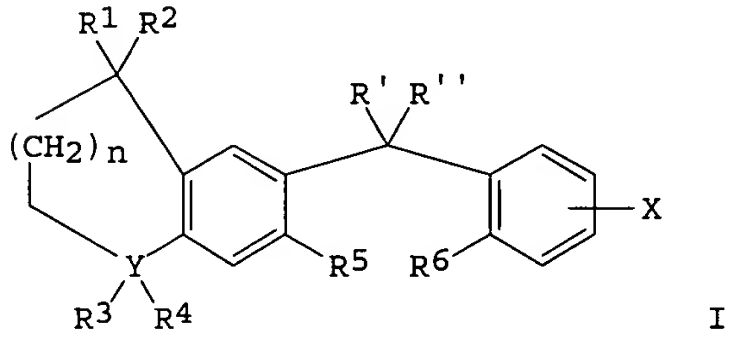

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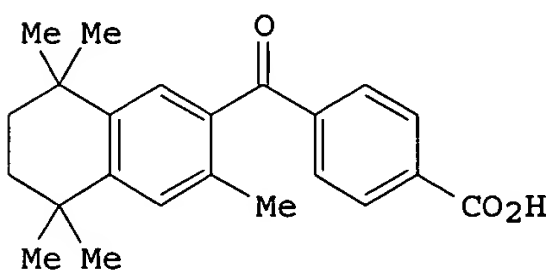

II

AB Ligands which selectively activate retinoid X receptors (RXR) in preference to retinoic acid receptors (RAR) are claimed. Claimed per se are several Markush structures, e.g., compds. I [R1, R2 = H, alkyl, acyl; Y = C, O, S, N, CH(OH), CO, SO, SO2, or a salt derivative; R3, R4 = H, alkyl, or is absent; R', R'' = H, alkyl, acyl, OH, alkoxy, thiol, thio ether, amino; or R'R'' = :O, :CH2, :S, :NOH, :NCN, CH2CH2, CH2O, etc.; R5, R6 = H, alkyl, halo, NO2, OH, alkoxy, SH, alkylthio, (di)(alkyl)amino, etc.; X = CO2H or derivs., CHO, tetrazolyl, PO3H2, SO3H, CH2OH, etc.], represented by 43 synthetic examples. Thus, acylation of 1,1,4,4,6-pentamethyl-1,2,3,4-tetrahydronaphthalene by mono-Me terephthalate using PCl5 and then

AlCl3, and saponification of the ester product, gave title compound II. In a cotransfection assay, II activated RXR subtypes (α, β, γ) with efficacies of 130%, 52%, and 82%, resp. (vs. all-trans-retinoic acid as 100%), but had <2% to <4% efficacy for RAR subtypes. I synergistically increased the activities (e.g., antihyperproliferative) of RAR-active ligands, as well as other hormonal systems (e.g., clofibrate and 1,25-dihydroxyvitamin D activities).

AN 1994:217004 CAPLUS
DN 120:217004
TI Compounds (naphthalene and indane derivatives) having selectivity for retinoid X receptors
IN Boehm, Marcus F.; Heyman, Richard A.; Zhi, Lin
PA Ligand Pharmaceuticals Inc., USA
SO PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

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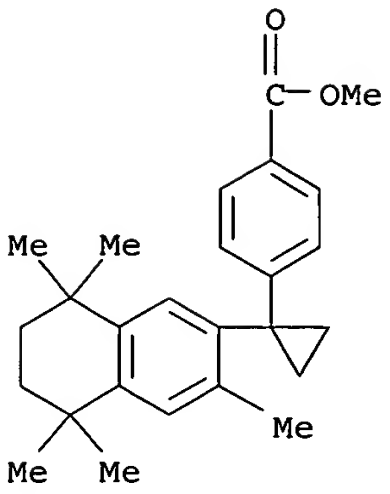
	US 1993-141496	A1	19931022		
	US 1993-141914	A1	19931022		
	WO 1993-US10094	W	19931022		
	WO 1993-US10166	W	19931022		
	WO 1993-US10204	W	19931022		
	US 1995-479920	B1	19950607		
	US 1995-485386	A1	19950607		

OS MARPAT 120:217004

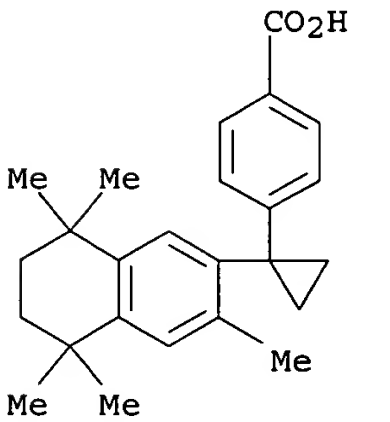
IT **153559-88-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as intermediate for retinoid receptor ligand)

RN 153559-88-7 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8,8-pentamethyl-2-naphthalenyl)cyclopropyl]-, methyl ester (9CI) (CA INDEX NAME)



IT **153559-62-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as retinoid receptor ligand)
RN 153559-62-7 CAPLUS
CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8,8-pentamethyl-2-naphthalenyl)cyclopropyl]- (9CI) (CA INDEX NAME)



1/24/06

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Uploading C:\Program Files\Stnexp\Queries\008141496-2.str

L1 STRUCTURE UPLOADED

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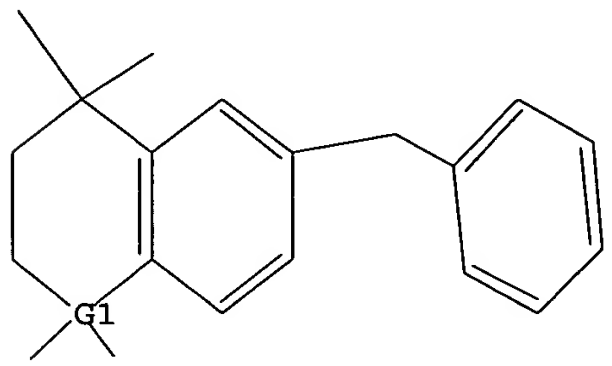
L1 HAS NO ANSWERS
L1 STR



G1 O,S,N

Structure attributes must be viewed using STN Express query preparation.

=> s l1
SAMPLE SEARCH INITIATED 12:47:16 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 0 TO ITERATE

100.0% PROCESSED 0 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 0 TO 0
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 ful
FULL SEARCH INITIATED 12:47:21 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 0 TO ITERATE

100.0% PROCESSED 0 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L3 0 SEA SSS FUL L1

=>